

**REMARKS**

Claims 1-16 are pending in this application.

Claims 1, 2, 8, 9, and 12-14 have been amended to effect minor editorial revisions to the claim language. No substantive amendments have been made to the claims.

Claims 1-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,032,126 to Zalewski et al. (hereinafter "Zalewski '126") in view of U.S. Patent Application Publication No. 2005/0010529 to Zalewski et al. (hereinafter "Zalewski '529").

Zalewski '126 relates to a method and apparatus for creating a dynamic storage pool for data recovery (Abstract). Zalewski '126 utilizes two types of replication: mirrors for physical replication and snapshots for logical replication (column 2, lines 20-39). The replication policies are dynamic and adaptable, based on application server deployment (column 3, lines 21-29 and 36-45).

To recover data, a user of the method selects a recovery template based on "the type of disruption involved, physical, logical or combined" which permits the user to select the source for data recovery (column 4, lines 9-13). Data recovery is performed only if a disruption occurs (column 5, lines 34-57).

Applicants respectfully disagree with the Examiner's characterization of Zalewski '126 as applied to the present application. The Examiner argues that

Zalewski '126 teaches the step of organizing the mapping of the writes into mapping data structures wherein the structures enable the primary volume to be rewound to any point in time. Zalewski '126 does not disclose any type of mapping data structure nor does it disclose the concept of rewinding to "any point in time" as defined in the present application. As taught by Zalewski '126 at column 2, lines 28-30 (emphasis added):

Strategies for handling logical disruptions include using snapshot techniques to generate periodic PIT replications to assist in rolling back to previous stable states.

The terms "periodic PIT replications" and "previous stable state" do not indicate the concept of "any point in time" as used by the present application. In the present application, the primary volume can be rewound to any point in time, regardless of whether the primary volume is in a stable state or not at the previous point in time. The terms "periodic PIT replications" and "previous stable state" indicate that there are time gaps in the coverage between PIT replications.

Zalewski '529 contains the same teachings in regard to periodic PIT replications (paragraph 0014) as Zalewski '126. As such, Zalewski '529 does not disclose any type of mapping data structure nor does it disclose the concept of rewinding to "any point in time" as defined in the present application.

In regard to claim 8, the Examiner applied the same arguments from claim 1 to claim 8. Claim 8 recites similar features to claim 1, and in particular, claim 8

recites the step of organizing the mapping of the writes between the primary volume and the secondary volume into delta maps wherein the delta maps are structured to enable the primary volume to be rewound to any point in time. As discussed above in connection with claim 1, neither Zalewski '126 nor Zalewski '529 disclose delta maps (a type of data structure) or the "any point in time" concept, and therefore fail to teach all of the features of the present application.

In regard to claim 12, the Examiner applied the same arguments from claim 1 to claim 12. Claim 12 recites a data protection system configured to manage the duplication of writes to the secondary volume and to map data between the primary volume and the secondary volume using delta maps. As discussed above in connection with claim 1, neither Zalewski '126 nor Zalewski '529 disclose delta maps, which are a type of data structure, and therefore fail to teach all of the features of the present application.

Because neither Zalewski '126 nor Zalewski '529 teach all of the features of the present application nor do the cited references contain a hint or suggestion relating to those features, a combination of Zalewski '126 and Zalewski '529 would not lead one skilled in the art to the invention recited in claims 1, 8, and 12 of the present application.

Because the independent claims (i.e., claims 1, 8, and 12) are distinguishable over the cited references, the dependent claims (i.e., claims 2-7, 9-11, and 13-16) are

**Applicant:** Stager et al.  
**Application No.:** 10/771,613

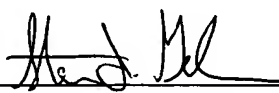
also distinguishable over the cited references without the need for additional comment.

It is respectfully submitted that the amendments and remarks made herein place pending claims 1-16 in condition for allowance. Accordingly, entry of this amendment as well as reconsideration and allowance of pending claims 1-16 are respectfully requested.

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400. In the event that a subsequent Office Action will be issued, the undersigned respectfully requests a telephone interview with the Examiner prior to the issuance of the Office Action. An Applicant Initiated Interview Request is being submitted with this Reply.

Respectfully submitted,

Stager et al.

By   
Steven J. Gelman  
Registration No. 41,034  
(215) 568-6400

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103  
SJG/mnr